

**Iowa Department of Natural Resources**  
**Wastewater Section**  
**Construction Permit Application**  
**SCHEDULE R1, Sludge Dewatering & Disposal**

DATE PREPARED	PROJECT IDENTITY	DNR USE
DATE REVISED		PROJECT NO.
		PERMIT NO.

1. Sludge Drying Beds

Parameter	Unit 1	Unit 2	Unit 3
Covered or Open			
Effective Area (ft <sup>2</sup> )			
Area Per Capita (ft <sup>2</sup> )			
Gravel Depth (in.)			
Sand Depth (in.)			
Underdrain Size (in.)			
Underdrain Spacing (C-C)			

Freeboard above sand \_\_\_\_\_ in. Are splash pads provided? Yes ☐ No ☐  
 Are concrete truck tracks provided? Yes ☐ No ☐ spacing (C-C) \_\_\_\_\_ ft  
 Distance between high groundwater and underdrain system \_\_\_\_\_  
 Drainage from bed discharged to \_\_\_\_\_

2. Sludge Filters

Type and volume of sludge to be handled \_\_\_\_\_  
 No. of filters \_\_\_\_\_ Size \_\_\_\_\_ Total Area \_\_\_\_\_  
 Capacity (#ft<sup>2</sup>/hr) \_\_\_\_\_ Total Capacity \_\_\_\_\_ #/hr  
 Chemicals used \_\_\_\_\_  
 Method of conditioning \_\_\_\_\_  
 Filtrate discharged to \_\_\_\_\_

3. Sludge Lagoon

Number of lagoons \_\_\_\_\_ Dimensions \_\_\_\_\_  
 Total volume of lagoons \_\_\_\_\_ Life expectancy (yrs) \_\_\_\_\_  
 High groundwater elevation (MSL) \_\_\_\_\_  
 Provide distance to the nearest water well \_\_\_\_\_ feet  
 Provisions to protect groundwater \_\_\_\_\_  
 Method for cleaning \_\_\_\_\_

4. Final Sludge Disposal

\_\_\_\_\_ Landfill or burial: \* identify site \_\_\_\_\_  
 \_\_\_\_\_ Low rate land application \* \_\_\_\_\_ Incineration  
 \_\_\_\_\_ High rate land application \* \_\_\_\_\_ Pyrolysis/wet air oxidation  
 \_\_\_\_\_ Other (identify) \_\_\_\_\_  
 a. Type of sludge (identify last treatment process) \_\_\_\_\_  
 b. Method of handling \_\_\_\_\_  
 c. Available equipment \_\_\_\_\_  
 d. Volume and frequency of disposal \_\_\_\_\_  
 e. Percentage volatile solids in raw sludge \_\_\_\_\_  
 f. Percentage reduction of volatile solids in stabilized sludge \_\_\_\_\_

\* If landfilling, burial or high rate land application of sludge is proposed, an additional permit from the Iowa Department of Natural Resources will be required. Complete and submit DNR form 43 – Application for Sanitary Disposal Project Permit. If low rate land application of municipal sewage sludge is proposed, Schedules R2A and R2B must be submitted for this project.